

Dorsey, Nancy

From: Dorsey, Nancy
Sent: Thursday, January 28, 2016 12:20 PM
To: (b) (6)
Cc: Dellinger, Philip; Overbay, Michael
Subject: RE: Wastewater Injection Disposal Sites; Oil Industry

Dear Mr. Meysing,

Thank you for your inquiry regarding injection induced earthquakes in Oklahoma. In your inquiry, you request EPA to intervene in this matter. Consistent with Congressional intent under the Safe Drinking Water Act of 1974, the Underground Injection Control Program for oil and gas related injection wells in Oklahoma was delegated to the Oklahoma Corporation Commission (OCC) in 1981. As such, OCC is responsible for regulation of oil and gas related injection wells to protect underground sources of drinking water, including risks from injection induced seismicity. EPA maintains oversight responsibility of this delegated program.

EPA shares your concern about the ongoing seismic activity in Oklahoma. Under oversight authority, EPA has been providing technical support and recommendations to the OCC in an effort to address risks to USDWs posed by injection induced seismicity. EPA also developed a report^[1] released in February 2015, to provide strategies and recommendations for states to address injection induced seismicity. Although OCC has implemented several actions consistent with this report, EPA recommended further action in its 2014 End of Year Evaluation Report for the OCC program, released in September 2015. These recommendations included further reductions of injection volumes into the Arbuckle Formation and geologic assessment of the Arbuckle to determine if pressure increases from injection into the Arbuckle are communicating with stressed faults in basement rocks.

Many of OCC's actions responding to magnitude 4 earthquakes have been in the nature of requests to the disposal operators, in part because the OCC does not have explicit rules with respect to earthquakes caused or potentially caused by UIC operations. So far, all of the operators have honored these requests, though in some cases through a modified agreement. The Oklahoma legislature would be the most effective agency to provide OCC the authority and mandate to increase their response to ongoing seismicity.

EPA is closely monitoring the ongoing seismic activity, including trends in frequency and magnitude of seismic events, and continues to offer technical support and recommendations to the OCC. If you have questions, please contact me, information below, or my supervisor Phil Dellinger at 214-665-2294.

Sincerely,
Nancy Dorsey

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Oklahoma Class II Program Manager
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214-665-2294
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(b) (6)

Sent: Wednesday, December 30, 2015 12:13 PM

To: Okpala, Maria

Cc: Larry Meysing

Subject: Wastewater Injection Disposal Sites; Oil Industry

Hello Maria.

This is to inquire if the EPA has jurisdiction over wastewater disposal from the oil industry, specific to wastewater injection disposal sites and their scientifically proven impact on earthquake activity.

After 2 years of home damaging earthquakes, I am convinced that the State of OK is purposefully following a path that will never prove the cause and effect of wastewater injection disposal sites causing earthquakes, so that the state doesn't have to regulate the oil industry on wastewater injection disposal sites. The State of OK could require the closing of any wastewater injection disposal site on a known fault line or within 50 miles of a residential area. This inaction or possible coverup by Governor Mary Fallin and Corporation Commission Chair, Bob Anthony, is allowing oil companies higher profits through cheap wastewater disposal, at the cost of relentless damage to taxpayers homes caused by earthquakes. Wastewater could be disposed of through treatment plants, but that would cost the oil industry more money, reducing their profits.

Please review the following links. I would call your attention to the map in the first link showing the unchecked results of numerous earthquakes in OK, compared to our border states. I would also call your attention to the article titled; High-rate injection is associated with the increase in U.S. mid-continent seismicity, by authors Weingarten, et al. I have referenced this data in a letter to Chairman Anthony and Governor Fallin and received no response to date.

The second link is to an article explaining the difference between wastewater injection disposal versus regular fracking from our neighboring state of TX. The oil industry tries to confuse the issue by lumping wastewater disposal and fracking together. Both links have been shared with Chairman Anthony and Governor Fallin with no response to date.

<http://earthquake.usgs.gov/research/induced/>

<https://stateimpact.npr.org/texas/tag/earthquake/>

I have attached a copy of my letter to Chairman Anthony regarding the request to shut down wastewater injection disposal sites on known fault lines and within 50 miles of residential areas. I find it interesting that Chairman Anthony of the OK Corporation Commission has posted a slide presentation defending oil industry hydraulic fracking on the OCC state website.

Thanks.

(b) (6)

^[1] <http://www.epa.gov/sites/production/files/2015-08/documents/induced-seismicity-201502.pdf>

Dorsey, Nancy

From: Dorsey, Nancy
Sent: Tuesday, August 04, 2015 3:33 PM
To: Dellinger, Philip
Subject: FW: ALFALFA COUNTY
Attachments: AlfalfaCo_seismicity.pptx

Importance: High

Wrong email, sorry!

From: Dorsey, Nancy
Sent: Tuesday, August 04, 2015 2:56 PM
To: Charles Lord; Patricia Downey; Megan Crocker (b) (6); Jim Marlatt; Phil Dellinger
(b) (6)
Subject: ALFALFA COUNTY
Importance: High

I made a start at dropping in some of the 2015 Arbuckle cumulative. Of course the vast majority did not give the early history, so they may cover anywhere from only two weeks to 210 days. (HINT HINT: request initial by month values)

There are certainly 'obvious' trend lines of seismicity.

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Dorsey, Nancy

From: Dorsey, Nancy
Sent: Thursday, July 02, 2015 8:29 AM
To: Charles Lord
Subject: AOI +

Hi Charles,

I am working from home today ((b) (6))

How did your meeting go yesterday, was it as anticipated?

A thought, if you get the go ahead on the expanded area and cuts, can you at the same time require electronic filing of the data? Even if it is filling in the spreadsheet (properly) and e-mailing it back?

Which spreadsheets have the latest volumes and plug backs? I think I have it, but ...

Thanks and happy 4th!
Nancy

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